

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

A NEW GENUS (*NEOTOMODON*) AND THREE NEW SPECIES OF MURINE RODENTS FROM THE MOUNTAINS OF SOUTHERN MEXICO.

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Still another genus—and one strikingly different from any heretofore described—is represented by 57 specimens in Mr. E. W. Nelson's rich collections from southern Mexico. The animals were found living among dense grass at high elevations on Mt. Orizaba, Puebla; the Cofre de Perote, Vera Cruz; the mountains at Nahuatzin, Michoacan; and on Mt. Popocatepetl, Mt. Toluca, and others about the valley of Mexico. Those from Mt. Orizaba and the Cofre de Perote are distinct species; all the others may be classed together as a third species.

Genus *NEOTOMODON* nobis.

Type, Neotomodon alstoni sp. nov., from Nahuatzin, Michoacan, Mexico.

Characters.—Size of a large *Microtus*; ears large and nearly naked; tail medium or rather short; fur soft and dense; plantar tubercles 6; mammæ 6; pectoral $\frac{1}{2}$; inguinal $\frac{2}{3}$; general appearance intermediate between *Microtus* and *Peromyscus* of the *guatemalensis* group. Skull and teeth unique; skull broad and rather high; braincase short and rounded [in *N. alstoni* angular and truncate posteriorly in old age]; zygomata large and broadly spreading, the anterior root deeply notched by anteorbital slit, the outer lamina of which is produced far forward; incisive foramina very long and open; diastema $\frac{1}{3}$ the basal length of skull. Molars rooted, large, and very massive, with flat crowns and heavy enamel as in *Neotoma*; enamel loops open throughout; m_1^1 and m_2^2 essentially alike, each with 3 salient enamel loops and 2 deep reëntrant angles on outer side and 2 salient loops and 1 shallow reëntrant angle on inner side, as in *Neotoma desertorum*, from which the teeth differ in having the loops more nearly

transverse and the two ends of each crown more alike; m^3 a cylindrical peg; enamel pattern of lower molars in general like that of *Hodomys*, with differences in detail: m_1 and m_2 with 3 salient loops and 2 reëntrant angles on each side, the middle loops of the two sides not opposite; $m_{\frac{1}{2}}$ with anterior loop on outer side narrow and followed by a shallow reëntrant angle; $m_{\frac{2}{3}}$ shaped much like letter S: outer side with 2 prominent and strongly convex loops and 1 deep reëntrant angle; inner side with a convex anterior loop, a moderately deep reëntrant angle, and a long flat heel which curves outward posteriorly to form posterior loop on outer side.

The enamel pattern of the crowns of the middle upper and 1st and 2d lower molars changes rapidly with wear; that of the last lower molar more slowly; in m^2 the anterior reëntrant angle on outer side disappears, leaving a large anterior and small posterior lobe, with a small enamel island in the former; in m_1 and $m_{\frac{1}{2}}$ the anterior reëntrant angle on outer side and posterior reëntrant angle on inner side disappear, converting the crown into two large lobes not unlike a figure 8 turned sideways; in $m_{\frac{2}{3}}$ the resulting shape is more like the letter S; in m_3 the reëntrant angle on inner side disappears with age, leaving the inner side plain. The upper molars seem too large for the jaw, and the middle ones are sometimes tilted out of line.

Neotomodon alstoni sp. nov.

Type from Nahuatzin, Michoacan, Mexico (alt. 8500 ft.). No. 50534, ♂ old, U. S. Nat. Mus., Biological Survey Coll. Collected Oct. 12, 1892, by E. W. Nelson. Orig. No. 3580.

Characters.—Size of a rather large *Microtus pennsylvanicus*; ears large and scantily haired; hind feet rather long and slender; tail shorter than head and body, sharply bicolor, and moderately haired; color dusky grayish. *N. alstoni* is the largest of the three species here described.

Color.—Upper parts dusky grayish, darkened on back, and varying with season to dull fulvous brown; under parts dark plumbeous, washed with white and with a rather faint buffy suffusion on pectoral region; wrists and ankles dusky, the dusky extending out a short distance on metatarsus; fore and hind feet white; tail bicolor, dusky above, whitish below.

Cranial characters.—The cranial and dental characters have been fully described under the genus and need not be repeated. Compared with the other known species of the genus, *perotensis* and *orizabæ*, the skull is larger and heavier, and when old much more angular.

Measurements.—Type specimen (♂ old): Total length 225; tail vertebræ 103; hind foot 28. Average of 7 specimens from type locality: Total length 220; tail vertebræ 101; hind foot 26.5.

Remarks.—Specimens referred to this species were collected by Mr. Nelson at Nahuatzin, Michoacan, Huitzilac, Morelos, and the following places in the State of Mexico: Amecameca, Ajusco, north slope of Volcan Toluca, Toluca Valley, Salazar, and Mt. Popocatepetl.

Neotomodon perotensis sp. nov.

Type from Cofre de Perote, Vera Cruz, Mexico (alt. 9500 ft.). No. 54398, ♀ ad., U. S. Nat. Mus., Biological Survey Coll. Collected May 29, 1893, by E. W. Nelson. Orig. No. 4897.

Characters.—Similar to *N. alstoni*, but ears and tail shorter; color paler, with a distinct blackish dorsal stripe in summer pelage.

Color.—Upper parts in fresh summer pelage (end of May) grayish buff, grayest on head, buffy on sides, with a distinct (but not sharply limited) blackish band on back; under parts white, suffused with buffy on pectoral region, and with the plumbeous basal fur slightly showing through; wrists and ankles dusky; fore and hind feet white; tail sharply bicolor, dusky above, white below. Specimens in left-over winter pelage are much darker and resemble *N. alstoni*.

Cranial characters.—Skull similar to that of *N. alstoni*, but slightly smaller, and in old age not becoming so angular.

Measurements.—Type specimen: Total length 212; tail vertebræ 91; hind foot 24. Average of 4 specimens from type locality: Total length 213; tail vertebræ 92.5; hind foot 25.

Neotomodon orizabæ sp. nov.

Type from Mt. Orizaba, Puebla, Mexico (alt. 9500 ft.). No. 53486, ♂ old, U. S. Nat. Mus., Biological Survey Coll. Collected April 26, 1893, by E. W. Nelson. Orig. No. 4747.

Characters.—Similar to *N. alstoni* and *perotensis*, but much smaller and grayer, with slightly smaller ears and decidedly shorter tail. Resembles a gray *Microtus*.

Color.—Upper parts uniform buffy-gray; under parts white, suffused with buffy on pectoral region, with plumbeous basal fur showing through; wrists and ankles dusky; fore and hind feet whitish; tail sharply bicolor, brownish above, white below.

Cranial characters.—Skull like that of *perotensis*, but smaller and weaker.

Measurements.—Type specimen: Total length 194; tail vertebræ 81; hind foot 24. Average of 4 specimens from type locality: Total length 194; tail vertebræ 82; hind foot 25.